

REMARKS

Claims 1-67 are currently pending in this application. Claims 1, 18, 30, 35, 38, 39, 42-49 and 52 are currently amended. Claims 53-67 are new. No new matter has been added by way of this amendment.

The Office Action Was Improperly Made Final

As an initial matter, Applicant respectfully submits that the Office Action was improperly made final. (The cover sheet indicates the Office Action is not final. The conclusion section of the detail indicates the Office Action is final). The Examiner has provided no basis for the rejection of claims 35-38. Thus, the Office Action was improperly made final. *See* MPEP § 707.07(d) (“When a claim is refused for any reason relating to the merits thereof it should be ‘rejected’ and the ground of rejection fully and clearly stated.”). *See also* 37 CFR §§ 1.104 and 1.113 (“In making such final rejection, the examiner shall repeat or state all grounds of rejection then considered applicable to the claims in the application, clearly stating the reasons in support thereof.”). In addition, Applicant previously requested an interview and submitted an Applicant Initiated Interview Request form concurrent with filing the Response Amendment on February 28, 2005. The Examiner made the Office Action final without scheduling or conducting an interview with the Applicant, to which Applicant is entitled. In the event the Examiner finds the Application is not in a condition for allowance after considering this Response, Applicant respectfully requests that the Examiner withdraw the finality of the Office Action and schedule an interview with the Applicant to discuss the allowability of the claims over the cited references.

Objections to the Claims

The Examiner objected to claim 43 under 37 C.F.R. § 1.75(c) as being in improper dependent form for failing to further limit the subject matter of a previous claim. Applicant respectfully traverses the Examiner’s objection. The Examiner states: “Claim 43 recites a conditional for when a type of packet is received through the second network, however, this feature is not required for the parent claim, since a client request packet is received through a first network, and can generate either the first type or the second type of packet.” Claim 43 properly recites features that depend from claim 42. Specifically, claim 42 recites, “...

selectively generating ... a second type of network packet for transmission ... at a second port coupled to a second network.” Claim 43 recites, “[t]he computer-readable memory medium of claim 42, further comprising instructions that control the processor by: when a network packet of the second type is received at the second port coupled to the second network, selectively generating a third type of network packet for transmission to the client through the first network.” Claim 43 specifies what happens when the second type of packet is received, and thus further limits claim 42, from which claim 43 depends.

Claim Rejections Under 35 U.S.C. § 112

The Examiner rejected claims 47 and 48 under 35 U.S.C. § 112, Second Paragraph, as indefinite because no antecedent basis was provided for “the first local area network”. Applicant respectfully traverses the Examiner’s contention that claims 47 and 48 are indefinite. Claim 47 recites, “the means for receiving packets from a global network comprises a connection to a first local area network and the means for transmitting the second type of packet comprises a connection to a second local area network that is logically separate from the first local area network,” (emphasis added), and thus provides an antecedent basis for the first local area network. Applicant has amended claim 48 to depend from claim 47.

Claim Rejections Under 35 U.S.C. § 102(b)

The Examiner rejected claims 42, 43 and 45-49 under 35 U.S.C. § 102(b) as anticipated by Aversa et al., Load Balancing a Cluster of Web Servers, Technical Report BUCS-TR-1999-01, Boston University, Computer Science Dept. (January 1999) (hereinafter “Aversa”). Applicant respectfully traverses the Examiner’s rejections.

Claim 42, as amended, recites, “when a client request packet is received at a first port coupled to a first network, selectively generating, based at least in part on the maintained state table, a first type of network packet for transmission to a client through the first network or a second type of network packet for transmission to another processor residing in a different one of the plurality of servers at a second port coupled to a second network that is logically separate from the first network.” The Examiner points to Figure 2 of Aversa, and contends the first network is the Internet and the second network is the LAN. Claim 42 has been amended to clarify that the client request is received at a port coupled to a first network that is not the same

as the second port coupled to the second network. Claims 43-45 depend from claim 42. Thus, Aversa does not teach, suggest or motivate claim 42, or claims 43-45, which depend from claim 42.

Claim 46, as amended, recites, “means for transmitting the second type of packet to another server in the server farm, wherein the means for transmitting the second type of packet bypasses the means for receiving packets from the global network.” The Examiner again points to Figure 2 of Aversa, the Internet as the global computer network and the LAN as the means for transmitting the second type of packet, and to the “rewriting” language of Section 3 of Aversa. The LAN of Figure 2, however, receives the client packets from the Internet and routes the received packets to the servers. Thus, since the LAN of Figure 2 is, according to the Examiner, the “means for receiving packets from a global network,” then the LAN of Figure 2, by definition, cannot also be the claimed “means for transmitting the second type of packet to another server in the server farm, wherein the means for transmitting the second type of packet bypasses the means for receiving packets from the global network.” Accordingly, Aversa does not teach, suggest, or motivate claim 46, or claims 47-48 which depend from claim 46.

Claim 49 has been amended and is addressed in more detail below in the discussion of the Examiner’s rejections under 35 U.S.C. 103(a). Applicant, however, respectfully traverses the Examiner’s unsupported (and, at least with regard to claims 46-48, wholly irrelevant) assertion that “migrating the connection” means “servicing the connection.” See Office Action at 4, ¶ 10. “Migrating a connection” and “servicing a connection” are neither identical nor mutually exclusive phrases. In other words, a device, such as a network interface card in the context of claim 49, may (depending how broadly the phrase “servicing a connection” is used) both service a connection and migrate a connection, but it may also service a connection without migrating the connection or migrate a connection without servicing the connection. Applicant notes that none of the claims at issue recite “servicing” a connection. Illustrative examples of migrating a connection are discussed in the specification at, *e.g.*, pages 21, 23-24, 30-34, 40-41, 43, and 45-54. See also, Figures 11c, 11d, 11i, 14 and the descriptions thereof in the specification.

Single Reference Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-11, 13-16, 18-28 and 30-33 under 35 U.S.C. § 103(a) as obvious over Aversa. The Examiner appears to have rejected claims 12, 17, 29, 34, 39-41, 44 and 50 under 35 U.S.C. § 103(a) as obvious over Aversa, but provides no statutory basis for the rejections and does not identify how to modify Aversa to satisfy the subject matter or aspects of the claims or any motivation for doing so. The Examiner initially bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142. Therefore, Applicant respectfully traverses the Examiner's 103 rejections.

Independent claim 1, as amended, recites, "a first computing device comprising a first port and a second port ... a first network coupled to the first port, ... a second network coupled to the second port and that is logically separate from the first network." Independent claim 18, as amended, recites, "the first computing device coupled to a first network via a first port and coupled to a second network via a second port, the first and second networks being logically separate." The Examiner identifies server 4 of Figure 2 as the claimed first computing device. The only network arguably coupled to server 4 in Figure 2 is the LAN. Thus, the LAN, by definition, cannot be both the recited "first network" and the recited "second network ... that is logically separate from the first network."

In addition, the Examiner's apparent contention that the claimed first and second ports are inherent in Aversa is incorrect because server 4 is not connected to two networks, and therefore server 4 would not inherently have two ports. Thus, Aversa cannot render claims 1 and 18, and claims 2-17, 19-34 and 53 that depend, respectively, from claim 1 and claim 18, obvious because Aversa does not teach, motivate, or suggest the claimed second network and the claimed first and second ports.

Further, the Examiner's argument regarding the motivation to modify Aversa is based on the improper use of hindsight. The Examiner points to no objective evidence motivating the suggested modification to Aversa. See MPEP § 2142. The Examiner argues "one of ordinary skill in the art would find it obvious to modify the teaching of Aversa to include a first port connected to a first network and a second port connected to a second network not the same as the first network, since it would reduce bottlenecking by not requiring one server to act

as a router for all the other servers.” The Examiner’s logic is flawed because using two networks does not necessarily eliminate one server acting as a router; it makes routing more efficient and makes it easy for a server to distinguish between an originally received packet and a redistributed packet. See Applicant’s specification at page 52. Aversa teaches away from the claimed second port and second network because Aversa specifically requires other means to distinguish between packets received from a client and rerouted packets. See Aversa, § 3.1, second paragraph. Claims 2-17 depend from claim 1 and claims 19-34 depend from claim 18. Thus, Applicant respectfully submits that claims 1-34 are not anticipated or rendered obvious by Aversa.

Independent claim 39, as amended, recites, “a first network to receive client requests and coupled to a first server of the plurality of servers; a second network logically separate from the first network, configured to redistribute received client requests and coupled to each of the plurality of servers; and a third network logically separate from the first and second networks, configured to transmit synchronization information and coupled to each of the plurality of servers.” As discussed above, Aversa does not disclose the second network, as server 4 in Figure 2 of Aversa is connected to a single network – the LAN, let alone a third network as recited. The Examiner suggests the single LAN of Aversa is all three claimed networks. This is an incorrect interpretation of Aversa. In Aversa, the servers are coupled to a single network for receiving client requests, redistributing received requests, and transmitting state information. Claims 40 and 41 depend from claim 39. Accordingly, Applicant respectfully submits that claims 39-41 are not anticipated or rendered obvious by Aversa.

Claim 44 depends from independent claim 42. Claim 42, as discussed above, is not anticipated by Aversa because Aversa does not teach, suggest or motivate the recited “second port coupled to a second network that is logically separate from the first network.” To the extent the Examiner relies on his arguments regarding claim 1 to establish obviousness (*i.e.*, to modify Aversa to include “a first port ... [and] ... a second port”), the Examiner’s argument is based on hindsight, and thus fails to establish that the recited ports are obvious. Accordingly, Applicant respectfully submits that claim 44 is not anticipated or rendered obvious by Aversa. The Examiner’s rejection of claim 50 is discussed below.

Multiple Reference Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claims 51 and 52 under 35 U.S.C. § 103(a) as obvious over Aversa in view of U.S. Patent No. 6,185,619 issued to Joffe, et al. (hereinafter "Joffe"). Applicant respectfully traverses the Examiner's rejections. Claims 50-52 depend from independent claim 49.

Claim 49, as amended, recites, "the network interface card of the second computer system selectively outputs the request packet to the network interface card of the first computer system without using IP-IP encapsulation." The Examiner concedes that this is not disclosed by Aversa. The Examiner points to Column 12, lines 50-55 of Joffe as supplying the missing teaching and apparently to Column 3, lines 35-40 as supplying the motivation to combine the references. As a preliminary matter, the Examiner has not identified how to combine Aversa and Joffe to achieve the embodiment of claim 49 or identified what corresponds to the claimed first and second computer systems. The Examiner cites to Column 12, lines 50-55 of Joffe, where forwarding a request packet is suggested but no details are provided regarding any process for forwarding the packet. The description of Figure 4C at Column 13, line 56 through Column 14, line 22 indicates the "relaying takes place at the IP level," but does not provide an explanation of how the relaying occurs. There is no suggestion in Joffe to omit the use of IP-IP encapsulation techniques as claimed. Rather, there is explicit reference to "IP tunneling techniques." See Joffe, column 9, lines 53-56. IP tunneling refers to IP-IP encapsulation. See RFC 2003, Introduction. (A copy of RFC 2003 is attached to a previously filed Supplemental Information Disclosure Statement.) Thus, Joffe teaches away from the recited language "without using IP-IP encapsulation." In addition, in Joffe the relaying is done by a front-end component 360, not a network interface card as recited in claim 49. Front-end component 360 is described as software executed by a front-end server 212. See Figure 4A of Joffe. Further, Column 3, lines 35-40, pointed to by the Examiner to provide motivation, does not provide any specific motivation to combine anything. It is nothing more than a general statement that "what is needed is a system that automatically selects an appropriate server." Accordingly, Applicant respectfully submits that claim 49, as well as claims 50-52 that depend

from claim 49, are not anticipated or rendered obvious by Aversa, alone or in combination with Joffe.

With regard to new claims 54-68, independent claims 54 and 57 recite, "a first network configured to receive client packets; a second network logically separate from the first network and configured to redistribute received client packets; and a third network that bypasses the first network and the second network and is configured to transmit synchronization information" (or similar language). As discussed above, Aversa discloses a single local area network for receiving and redistributing client packets. Accordingly, Aversa, alone or in combination with Joffe, does not teach, suggest or motivate the limitations of claims 54-67.

Therefore, for these reasons and others, claims 1-68 are not anticipated or rendered obvious by Aversa, alone or in combination with Joffe. In the event the Examiner disagrees or finds minor informalities, Applicant respectfully renews its request for a telephone interview to discuss the Examiner's issues and to expeditiously resolve prosecution of this application. Accompanying this Amendment is a Second Request for Telephone Interview in the event the Examiner does not agree that the claims are allowable over the cited references.

In closing, Applicant respectfully requests the Examiner to enter these amendments and to reconsider this application and its early allowance. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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Enclosure:

Postcard

Second Applicant Initiated Interview Request Form

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